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FARM LABOR NEEDS FOR WARTIME MAXIMUM AGRICULTURAL PRODUCTION 1/

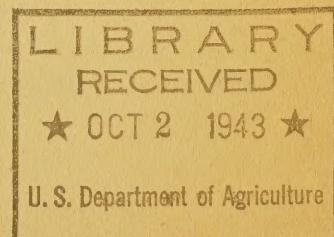
For the country as a whole, attainment of wartime maximum agricultural production would require a moderate increase over present numbers of year around farm workers and a fairly significant increase in number of seasonal workers. A vigorous farm labor program would be needed to provide the desirable number of skilled workers and see that the required number of seasonal workers are made available in the right place and at the right time. The most critical problems would be faced in supplying needed additional seasonal workers to specific areas.

Thus far in the war, agriculture has contributed record production of food and fiber in the face of reduced labor supplies and a restricted amount of farm machinery. It has furnished manpower to the armed forces and war industries and itself utilized proportionately more older workers, women, and youth. Farm labor shortage has been a subject of national concern, but relatively few instances of crop losses due to scarcity of labor have been reported. Increased farm production has been handled with fewer and less experienced and physically capable workers as a result of a longer work week, greater reliance on farm family labor, increased efficiency in the use of available labor and machinery, and the elimination and slighting of many farm tasks.

Much of the work left undone has probably been paid for at the price of deterioration in our agricultural productive plant. Moreover, the limit is rapidly being reached on the length of the farm work day, particularly for older workers. Opportunities still exist for increasing the effectiveness of the present farm labor force, especially through fuller utilization of the underemployed and a better routing and distribution of seasonal workers. Attainment of wartime maximum agricultural production would call for further improvement in the efficiency of use of farm labor as well as an increase in the number of workers employed. The latter may be difficult of accomplishment in view of the continued demands for manpower of the armed forces and war industry.

1/ Estimates of the number of additional workers needed for wartime maximum agricultural production (a level of production attainable by 1945-46) were made by the State Committees cooperating on the project, Maximum Wartime Production Capacity. A summary of reports prepared by these committees formed the basis for the discussions of additional worker needs in this chapter. It should be noted that the committees also estimated additional amounts of farm machinery and other production factors that would be required for maximum production. In this connection, it should be kept in mind that the estimates of additional workers required assume the availability to farmers of fairly significant additional amounts of farm machinery, particularly labor-saving machinery.

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The Magnitude and Character of Farm Worker Needs

Three major factors influence the magnitude and character of the additional worker requirements for wartime maximum agricultural production. The first relates to the type of production shifts needed; the second to the wartime impacts upon the farm labor force; and the third to the nature of farm employment.

Needs in Relation to Production Shifts

In general, wartime maximum agricultural production would involve a relative shift away from livestock production to crop production, particularly production of direct food crops. This production shift, i.e., maximum compared to 1943, is reflected in the estimates of number of workers needed. Thus, there is relatively more emphasis on additional seasonal workers and less on year-around workers (table 1).

Table 1. Total United States farm employment needed in specified months, wartime maximum agricultural production, with comparisons

Year	January	April	June	July	September
(Thousands of workers)					
1942 1/	8,287	9,483	11,917	12,009	11,390
1943 1/	8,171	9,308	11,659	11,749	3/11,502
1944 capacity 2/	8,217	9,509	12,047	12,080	11,591
Maximum capacity 2/	8,280	9,702	12,338	12,280	11,965
Change, : Number	109	394	679	531	3/463
1943 to :					
maximum : Percent	1.3	4.2	5.8	4.5	3/4.0

1/ Data from "Farm Labor Report", Bureau of Agricultural Economics, for the respective months.

2/ Estimates based upon State Committee reports, Maximum Wartime Production Capacity.

3/ The indicated 463,000 increase in employment for September does not fully reflect the magnitude of maximum production capacity needs. The increase in employment, September 1943 over September 1942, was contrary to the relationship that existed between employment in 1943 and 1942 for the other months prior to September. This was due to the early maturing of a number of crops, especially cotton, and by the relief of drought conditions in some sections of the country, enabling farmers to do some late summer sowing.

Year around worker needs for maximum production represent the same level of employment as existed in 1942, as indicated by the estimates for January, and a less than two percent increase over the 1943 level. Worker needs during the spring, summer and fall peak months would require substantial increases over both the 1943 and 1942 employment levels. The increased seasonality of farm labor needs that would be required for maximum production is also substantiated by comparison of estimates of man hours required for major crop and livestock production (table 2).

Table 2. Total man hours required for specified wartime maximum agricultural production, with comparisons 1/

Year	Major crops		Major livestock and livestock products (Millions of hours)
1942	8,490		6,440
1943	8,669		6,776
1944 capacity	9,001		6,702
Maximum capacity	9,472		6,844
Change, : 1943 to : maximum :	Number : Percent : :	803 9.3 :	68 1.0 :

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 1/ The man hour requirement data include direct labor only, i.e., no "maintenance" work such as fence and machinery repair, building upkeep, etc. is included. Direct labor on all crops and livestock normally includes from 80 to 85 percent of total hours of farm work. Requirements are in terms of the estimated work accomplishment of an average adult male worker.

Contemplated increases in production of major crops would necessitate more than a nine percent increase in man hours of work on crop production, while the change in major livestock production would call for an increase of only one percent in man hours of work on livestock. A large part of the increase in man hours for crop production is accounted for by labor-intensive, war critical crops. Additional labor to grow and harvest the increased peanut acreage represents over one-fourth of the total of 800 million additional man hours needed for wartime maximum crop production; man hours for additional potato acreage account for one-fifth, Irish potatoes and sweetpotatoes contributing about equally to the total; and extra acreage of commercial truck crops for processing and fresh market would require almost one-seventh.

The relatively small increase in man hours required for livestock production is primarily a result of a decrease in production of meat animals, resulting in a saving of one quarter of a billion man hours of labor, and an increase in production of milk requiring slightly over 300 million additional hours of labor.

Attainment of wartime maximum agricultural production would require about five percent more total man hours of labor than will the anticipated production in 1943. This compares with a slightly more than four percent estimated increase in the average annual level of needed farm employment.

Wartime Impacts on Farm Labor Force

The significance of farm worker needs for maximum production can be seen more clearly against a background of the wartime impacts upon the farm labor force. At the beginning of World War II, agriculture had a manpower supply at its disposal more than sufficient to meet its needs.

"In the 3 years preceding April 1943, the total number of persons in the armed forces and in nonfarm occupations increased by more than 14 million. It is estimated that net migration from farms and the net increase in the employment of farm residents in nonagricultural occupations contributed a little over 4 million of this number. Civilian net migration alone accounted for approximately 1.4 million, withdrawals to the armed forces for another million, and shifts of farm residents into nonfarm jobs for about 1.8 million." 2/

In spite of this large movement of actual or potential workers from the on-farm labor supply, the level of agricultural employment has shown only a slight decrease thus far. This has been possible through replacement of worker losses largely by persons who normally would not be depended upon for farm work. The nature of the changed composition of agriculture's working force can be seen by again comparing the situation in April 1940, with that of April 1943. Total farm employment in April of this year was only 200,000 less than in the same month 3 years earlier, but 1.1 million fewer farm men were reported as working on farms. However, there were 500,000 more farm women and 300,000 more farm workers under 14 years of age. In addition, persons working at both farm and nonfarm work had increased by 100,000. 3/ The results of a nation-wide survey made by the Department of Agriculture in September 1942 indicated about a 10-percent decrease in the number of men, aged 18-44, employed on farms in September 1942, compared to the same month a year earlier. Thus farm "employment" in 1943, while not at a materially lower numerical level than three years earlier, is composed of relatively more older workers, women and youth. Moreover, in order to get the wartime agricultural production job done, farm workers have put in more days per week and longer hours per day. Estimates of the Bureau of the Census indicate that the average hours of work per week of farm workers in June 1943 were 10.5 percent greater than in June 1942. The average of 12.8 hours per day put in by farm operators in June 1943 was about 6 percent greater than in June 1940, according to the Bureau of Agricultural Economics.

2/ Louis J. Ducoff, Margaret Jarman Hagood, and Conrad Tauber, "Effects of the War on the Agricultural Working Force and on the Rural Farm Population," Social Forces, Vol. 21, No. 4, p. 407. May 1943.

3/ Ibid., table 1, p. 410.

The ability of the present farm working force to absorb additional work is rapidly being eliminated. As a result, additional hours of work required would call for proportionately greater increases in the number of workers than in former years. In many areas a serious problem exists in replacement of skilled workers who have been lost to the farm labor force.

Foreseeable future changes in the total manpower situation of the nation also serve as a basis for judging the magnitude of the additional farm worker needs for maximum production. The War Manpower Commission has estimated that total manpower requirements of the nation for the armed forces and civilian industry will increase by 1.3 million, or 2.5 percent, from July of this year to July 1944. This indicated increase is a net result of projected additions of 2.0 million to the armed forces and 1.9 million to munitions and munitions materials industries, the food industries and Federal war agencies, partly offset by a decrease of 2.6 million in construction and building materials industries, trade and service employment, and other industries except transportation, fuel and utilities and textiles, clothing and leather whose manpower requirements are expected to show no change. ^{4/} Additional manpower demands for wartime maximum agricultural production would thus be superimposed upon a labor market that is growing exceedingly tight as evidenced by the increasing appeals to women to enter the labor force.

One factor with respect to the farm labor supply is particularly pertinent in judging the future impact of the armed forces' demand upon manpower. It relates to the occupational deferment of farm workers under the "Tydings" Amendment. As of September 1, 1943, 1,715,000 agricultural workers of the 18-37 year age group had been reclassified to the II-C or III-C status.

It has been estimated that if the Tydings Amendment had not been in effect, around one-half of these II-C and III-C registrants would have been called up because they would not have qualified for deferment on other grounds. Based upon physical disability rejection rate experience thus far, approximately one-half of those called would have been inducted. Thus, up to September 1943, over 400,000 year-around workers, who otherwise would have entered the armed forces, have remained on farms. By the end of the year many more persons will have been granted deferment on the basis of their agricultural occupation. Thus, agriculture has some assurance that a basic core of experienced, able-bodied workers will be maintained in its regular labor force. This is important in view of the additional dependence that may have to be placed upon the use, particularly during peak seasons, of less able and experienced workers.

The Nature of Farm Employment

A proper appraisal of the magnitude of additional farm worker needs requires an understanding of the nature of farm employment. Three characteristics of agricultural employment are particularly pertinent. In the first place, farm labor needs and employment are highly seasonal. The production shifts proposed for wartime maximum production would increase the seasonality of labor needs in many areas.

^{4/} War Manpower Commission, "Manpower Requirements", mimeographed release, June 28, 1943.

Secondly, over three-fourths of the yearly number of farm workers is made up of farm operators and members of their families. Moreover, employment of family labor increases as seasonal labor needs increase and declines as labor needs decline. A large part of the seasonal increase in employment of family labor is possible because of the fact that in most sections of the country, school summer vacations correspond with the peak labor demand seasons. Some additional adjustments in the time of school vacations would permit still greater use of the family labor reservoir.

Production shifts envisaged under wartime maximum production in the South might afford many opportunities for fuller use of the farm family labor reservoir. Increased emphasis on feed crops would "fill in" some slack months. Substitution of oats and soybeans for corn in some sections of the South would not only afford fuller utilization of family labor in months that at present are ones of slack labor demand, but also would reduce the competition for labor between corn and cotton. Contemplated further emphasis on peanuts and sweetpotatoes would also create opportunities for using otherwise partially idle labor. Increased wheat acreage in Oklahoma would present similar opportunities.

The third important aspect of the nature of farm employment relates to the existence of underemployment of labor on many farms in many areas. Underemployment is particularly prevalent on smaller farms that are not large enough to utilize effectively the time of the farm family. In a number of areas underemployment is associated with the seasonality of labor demands. Large numbers of farm workers are underemployed for a month or more when the labor needs in their own farming area are light. Underemployment on many other farms can more aptly be described as ineffective employment, since the annual production of workers is extremely low owing to the small quantity and poor quality of agricultural resources with they work.

Underemployment on farms has been reduced during the war years because large numbers of underemployed and ineffectively employed farm workers have migrated to industrial employment, entered the armed forces or have taken jobs on more productive farms. Many operators of small farms are now fully employed because they devote a significant part of their efforts to off-farm employment, either in industry or on other farms. Some underemployed workers still remaining on farms are either too old or physically unable to accept full-time jobs. There are still many capable workers remaining on small farms who can form an important source of labor for larger, more productive farms in need of their services. To the extent that labor programs can tap this source of supply the difficulty of securing needed additional manpower for wartime maximum production will be lessened.

Regional Aspects of Farm Worker Needs

Additional worker needs for wartime maximum agricultural production vary among regions largely as a result of differences in the type of production shifts envisaged and the varying effects of wartime impacts upon the farm labor force.

The greatest relative need for additional year around workers would be in the Northeastern States and to a lesser extent in some of the Western States. The farm labor supply in the Northeast has lost heavily to the war industries.

concentrated in that area. In addition to the contemplated wartime maximum increase in dairy production, the major farm enterprise in the area, will call for additional qualified regular workers on many commercial dairy farms. Also needed is an adequate supply of labor for farm services so that feed, fuel and fertilizer may be delivered to farm operators without delay and loss of time.

The Western States have been hard hit by worker losses to war industries and the armed forces. The supply of experienced, skilled labor is short, particularly on sheep ranches. Additional dairy hands also are badly needed in some States in the region.

While the relative need for additional year around workers in other regions is not as great, there is generally a real necessity for replacing some skilled workers lost from the farm labor force. A shortage of experienced farm machinery operators is a real problem in a number of States; in many instances there is need for labor for farm services such as trucking, feed grinding and machinery repair.

The greatest relative need for additional seasonal workers is in sections of the Southern and Northeastern regions. The peak need for additional seasonal workers in the South would occur in September and October. This reflects the harvest needs resulting from significant increases in acreage of peanuts and sweetpotatoes called for under wartime maximum production. These same months are also the ones in which most of the cotton, the acreage of which is increased slightly under maximum production, must be picked. Increased labor demands are not uniform in all sections of the South, however, and it should be possible to fill practically all the additional worker needs through a more effective redistribution and utilization of the labor supply available in the less highly commercialized farming sections. Large increases in acreage of commercial truck crops, Irish potatoes and dry beans will require corresponding increases in seasonal workers.

The changed pattern of production with its increased emphasis on crop as opposed to livestock production would result in needs for additional seasonal hands in the other regions of the country. Especially pressing demands will occur in many States in such operations as fruit and vegetable harvest, corn cutting and husking, detasseling corn and small grain and hay harvest.

Sources of Additional Farm Manpower

Farm labor need not be a limiting factor to attainment of wartime maximum agricultural production; but as indicated in the foregoing sections describing the magnitude and character of additional needs, the task of securing sufficient labor will by no means be an easy one. Fulfillment of these additional needs would require vigorous and effective planning plus necessary action programs. If several possible improvements were made in the use of our rural labor supply, however, the additional needs for maximum production would require only minor inroads on the other wartime manpower demands of the Nation. In the sections that follow, methods are suggested for supplementing the basic core of skilled and physically capable workers that it appears agriculture may be able to retain. Experience under the farm labor programs this year will be cited in illustrating possibilities.

Increased Efficiency of Individual Workers

Improved labor efficiency has been one of the important means whereby farmers have been able to accomplish record wartime agricultural production in the face of reduced labor supplies. However, many opportunities along this line still exist. A recent experiment conducted by the University of Vermont Agricultural Experiment Station will serve to illustrate opportunities for labor saving, and hence increased labor efficiency, that are possible even with respect to experienced farm workers.

Through a "time and motion" study analysis of dairy farm chores several ways were discovered in which labor efficiency might be increased. Recommended changes were of four general types.

- (1) Rearrangement of the stable.
- (2) Improvement of work routines.
- (3) Provision of adequate and suitable equipment.
- (4) Convenient location of tools and supplies.

A cooperating dairy farmer found that by adopting the labor saving suggestions, a little more than one-third of the time and about two-thirds of the travel for morning and evening chores could be eliminated. 5/

The efficiency of inexperienced workers can often be improved through the use of rather simple devices. For example, some inexperienced New Jersey tomato pickers were provided with colored metallic bands to be fitted on their fore-fingers as an aid in determining the color of tomatoes ready for picking. In another case, the provision to workers of a small board with holes of different sizes proved an effective means for their learning to grade green beans as they were picked. A New Mexico cotton picking experiment wherein operations and motions of better experienced workers were studied and the results applied to less able pickers indicated that significant increases in the cotton picking rate per worker was possible.

Through farm job instruction training more effective use can be made of inexperienced workers. "Farmers who have had assistance in 'how to instruct' feel that it helps inexperienced persons make their adjustment to farm work and develops a better understanding by farmers of how to use unskilled labor. Based on the experience of industry, good instruction will also cut down on the time required for new workers to learn a job, and reduce wastage of materials, damage to equipment, and accidents to persons." 6/

Because of the increased dependence that must be placed upon inexperienced seasonal workers, all possibilities along the above lines should be explored and utilized.

5/ R. M. Carter, "Labor Saving Through Farm Job Analysis," Vermont Agricultural Experiment Station Bulletin 503, June 1943.

6/ Foreword by L. M. Vaughan, "Farm Job Instruction Training," Extension Service Circular No. 405, U. S. D. A., April 1943.

Better Distribution of Labor Supply

Better distribution of the labor supply implies a fuller use of the workers or potential workers available to agriculture. Opportunities of this sort exist at several points. In the first place, a further extension of the practice of community exchange of labor and machinery is needed. These practices often are a means of assembling a crew necessary for a particular operation and in addition saving labor through fuller use of labor saving equipment. Numerous cases of successful community cooperation have been reported this year.

One of the real opportunities for securing a better distribution of the farm labor supply is through a fuller use of our underemployed rural manpower. Experience to date has shown that the underemployed are a good source of year around workers for the more productive farms.

Last winter a program was started to recruit, train and place underemployed farmers and farm workers on more productive farms in need of their services. The program was initiated originally by the Farm Security Administration and is being continued by the War Food Administration. As of June 30, 1943 around 5,000 underemployed workers had been recruited from less productive farms, and placed as year around workers on other farms. Short courses of training at State Colleges of Agriculture and elsewhere have been provided for those workers in need of such training. The volume of this type of adjustment in our farm labor force is somewhat limited during wartime. However, it still is an important means of supplying needed year around workers to larger, commercialized farms, and at the same time provides increased opportunity and new experience for the workers involved. Opportunities also exist for a fuller utilization of "seasonally" underemployed workers. One notable example of action along this line in 1943 was the 3,200 workers transported by the War Food Administration from Mississippi, Arkansas and Oklahoma to help harvest the spring wheat crop in North Dakota and Montana. These workers who were moved during July and August were recruited by the State Extension Services and the county Extension agents on an agreement that they were to be returned during September so as to be available for cotton picking and other harvest work in their home counties. Similar action was taken by the Extension Services and the War Food Administration in meeting the Maine potato harvesting labor needs. Over 1,700 workers were recruited in Kentucky, Arkansas and West Virginia and transported to the Maine potato fields. In addition, the States of Massachusetts, Rhode Island and Connecticut supplied 600 Boy Scouts and the War Food Administration made available over 200 Jamaican workers to assist in the harvest work. Extension of this "reciprocal agreement" technique among other States, as well as fuller exploitation of similar possibilities within State boundaries, should be a means of providing a significant portion of the additional manpower needs for wartime maximum agricultural production.

Room for marked improvement in the distribution of seasonal labor supplies along other lines still exists. Farmers and local officials can assist materially through careful planning and calculation of seasonal requirements in advance of time of need. In particular, it is essential that cases of "overstatement" of local labor needs be avoided in the future, if efficient use is to be made of limited supplies of workers. Better distribution of our seasonal agricultural labor supply can also be secured through better planning and routing of workers within and between local areas. Avoidance of lost worker time is definitely one means of securing additional output per worker and conserving existing farm manpower.

Workers From Nonfarm Sources

Nonfarm persons who normally would not engage in farm work - youth, women and businessmen - have been an important source of emergency seasonal labor on farms this year. Without their assistance, it is doubtful that farm employment could have been maintained at as high a level as has been the case. Service clubs, Chambers of Commerce, women's clubs, defense councils and civic organizations, schools and youth organizations are cooperating with agencies of the War Food Administration and the War Manpower Commission in mobilizing the residents of villages, towns and cities. Use of emergency nonfarm labor this year has been more successful than has been anticipated by many farmers. Examples too numerous to mention have been reported of crops being "saved" by the use of such workers. Even greater use will have to be made of nonfarm workers if wartime maximum production is attained. Those already used should be even more valuable in the future since their present efforts will serve to bring them out of the ranks of the completely inexperienced. Continued use of available training facilities will also increase the value to farmers of workers from this source.

Farm Labor From Other Sources

To obtain additional labor for farms, the War Food Administration, through the State Department, has negotiated agreements with the Governments of Mexico, the Bahama Islands and Jamaica permitting the importation of a limited number of workers. By August 31, 1943, 44,577 workers had been imported from Mexico; 4,448 from the Bahama Islands, and 8,828 from Jamaica. These workers have been used in 30 States cultivating and harvesting war essential food and fiber crops. Under agreements between the respective Governments involved, these workers are to receive the prevailing wage but not less than 30 cents per hour of work from the contracting employers and, in addition, must be furnished agricultural employment during at least 75 percent of the total number of work days during the period covered by their contracts.

Still other sources of labor have been utilized in 1943. As of September 1, 1943, county agents have placed 6,000 Japanese internees, 1,000 inmates of corrective and penal institutions, 1,000 conscientious objectors, 50,000 members of the military service who volunteered for farm work and were given passes for one to three days, and 6,000 soldiers who were detailed as emergency units by the War Department to help save crops such as the spring wheat crop in the Dakotas. In addition, 84,000 man days of war prisoner labor were used in June and July.

Several comments are in order with respect to the use of foreign workers and workers from the other sources mentioned above. While in terms of total numbers they appear to be a not too significant source, it should be remembered that they are used in areas where a serious need for labor to produce and harvest war-critical crops has developed. While they have been an expensive source of labor because of the Government supervision and travel subsidization involved, they have nevertheless been necessary and well worth the cost. Accomplishments of wartime maximum agricultural production would require even greater reliance upon workers from these sources.

In summary, it should be emphasized that additional labor needs that would be required for wartime maximum production are not large in the aggregate but nevertheless important in key areas and enterprises, and at critical seasons during the year. This does not imply, however, that the task of securing the labor necessary would be an easy one. The more complete mobilization and fuller utilization of our farm labor force necessary to achieve maximum wartime agricultural production would require careful planning and vigorous action by all agencies, farmers and other individuals concerned.

